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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/334,891	06/17/1999	GUIDO GHISOLFI	32461/GM/1P	5842
42635	7590	09/09/2005	EXAMINER	
COBARR SPA P. O. BOX 590 6951 RIDGE ROAD SHARON CENTER, OH 44256			PATTERSON, MARC A	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/334,891

Applicant(s)

GHISOLFI, GUIDO

Examiner

Marc A. Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 36,52-61 and 63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36-52-61 and 63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**  
**WITHDRAWN REJECTIONS**

1. The 35 U.S.C. 103(a) rejection of Claim 36 as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Kimura et al (U.S. Patent No. 5,972,445), of record on page 2 of the previous Action, is withdrawn.

**NEW REJECTIONS**

***Specification***

2. The disclosure is objected to because of the following informalities: There is no Claim 62.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 36, 52 – 53, 56 – 58 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Kimura et al (U.S. Patent No. 5,972,445) and Wilson et al (U.S. Patent No. 3,170,832).

With regard to Claims 36, 52 – 53, 56 – 58 and 61, Roulin et al disclose a container for food (column 3, lines 33 - 40) comprising a multi - layer material (column 6, lines 17 - 24), the

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material comprising a layer of a foamed sheet comprising polyester (column 3, lines 54 - 63), and, adhered to the foamed sheet, a film of polyester resin which is heat - sealable (column 3, lines 54 - 63); the film is coextruded (column 5, lines 62 - 65) the multi - layer material comprises creased lines (column 7, lines 4 - 14) which facilitate the folding of the material, and the container is obtained by folding (column 3, lines 63 - 66); however, the claimed aspect of the container being obtained by folding is directed to a product by process limitation and is therefore given little patentable weight, as Roulin et al disclose the structural limitations of the claimed container; the polyester film is made to adhere to the formed sheet by hot lamination (heat sealing; column 6, lines 17 - 23). With regard to the claimed aspect of the polyester being aromatic, Roulin et al teach the use of polyethylene terephthalate as a polyester of the invention (column 5, lines 13 - 19); the claimed aspect of the polyester being aromatic therefore reads on Roulin et al. Roulin et al fails to disclose a foamed sheet having a density of less than  $700 \text{ kg/m}^3$  and within the range of  $10 \text{ kg/m}^3$  to  $500 \text{ kg/m}^3$  and a crystallinity lower than 15% and a heat sealable film having a crystallinity lower than 15% and a container that is recyclable.

Kimura et al teaches a multilayer sheet (column 3, lines 33 - 34) comprising multiple layers of polyester (column 3, lines 33 - 34) in which all of the layers which are made of polyester have a crystallinity of less than 15% (the degree of crystallinity of the multilayer sheet is not more than 15%; column 4, lines 16 - 18) and recyclable (column 1, line 14) for the purpose of obtaining a sheet that has good heat sealing property (column 4, lines 20 - 22). One of ordinary skill in the art would therefore recognize the advantage of providing for the crystallinity and recyclability of Kimura et al in all of the polyester layers of Roulin et al, which comprises a multilayer sheet, depending on the desired heat sealability of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a crystallinity of the layers of less than 15% and recyclability of Kimura et al in Roulin et al in order to obtain a sheet that has good heat sealing property as taught by Kimura et al.

Wilson et al teach the use of a foamed polyester sheet having low density (layer of foamed low density polyester resin; column 2, lines 21 – 25) in the making of a sheet which is laminated with other layers (firmly united to other layers; column 2, lines 21 – 25) for the purpose of obtaining a sheet which is lightweight (column 1, lines 31 – 34). One of ordinary skill in the art would therefore have recognized the advantage of providing for the low density of Wilson et al in Roulin et al, which comprises a foamed polyester sheet, depending on the desired weight of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for polyester having low density in Roulin et al in order to obtain a sheet which is lightweight as taught by Wilson et al.

Wilson et al fail to teach a density less than  $700 \text{ kg/m}^3$  and within the range of  $10 \text{ kg/m}^3$  to  $500 \text{ kg/m}^3$ . However, Wilson et al teach the use of a polyester having low density, as stated above, and therefore teach the selection of the density depending on the desired density of the laminated end product. Therefore, one of ordinary skill in the art would have recognized the utility of varying the density of the foamed sheet to obtain the desired density of the laminated end product. Therefore, the density of the laminated end product would be readily determined by through routine optimization of the density of the foamed sheet by one having ordinary skill in the art depending on the desired use of the end product as taught by Wilson et al.

It therefore would be obvious for one of ordinary skill in the art to vary the density of the foamed sheet in order to obtain the desired density of the laminated end product, since the density of the laminated end product would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Wilson et al.

Roulin et al also fail to disclose a polyester film having a melting point of 50 to 200 degrees Celsius. However, Roulin et al discloses a film having a melting point greater than 500 degrees Fahrenheit (column 6, lines 46 – 50) and teaches that the film is selected depending on the desired heat seal temperature (column 6, lines 46 – 50). Therefore, one of ordinary skill in the art would have recognized the utility of varying the melting point to obtain a desired heat seal temperature. Therefore, the heat seal temperature would be readily determined through routine optimization of melting point by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the melting point in order to obtain a desired heat seal temperature, since the heat seal temperature would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Roulin et al. Roulin et al also fail to disclose a container in which the heat sealable film comprises two layers. However, Roulin et al disclose a container in which the heat sealable film comprises one layer, as discussed above. It would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to have provided for additional layers, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

5. Claims 55 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Kimura et al (U.S. Patent No. 5,972,445) and Wilson et al (U.S. Patent No. 3,170,832) and further in view of The Encyclopedia of Polymer Science and Engineering (Volume 12, page 214, 1985).

Roulin et al disclose a container comprising a polyethylene terephthalate sheet, therefore film, as discussed above. With regard to Claims 55 and 60, Roulin et al fail to disclose a container comprising 2 mole percent to 20 mole percent diacid repeat units which are derived from isophthalic acid

The Encyclopedia of Polymer Science and Engineering (Volume 12, page 214, 1985) teaches that it is known in the art to use polyethylene terephthalate - isophthalate copolymer instead of polyethylene terephthalate as the outer layer of a heat sealable polyester film for the purpose of obtaining a film having a lower softening and melting point (second paragraph). One of ordinary skill in the art would therefore have recognized the advantage of providing for the copolymer of The Encyclopedia of Polymer Science and Engineering in Roulin et al, Kimura et al and Wilson et al, which is comprises a heat sealable polyester film, depending on the desired softening and melting point of the end product.

It would therefore have been obvious to one of ordinary skill in the art to use a polyethylene terephthalate - isophthalate copolymer, thus an aromatic polyester obtained by polycondensation of a copolyethylene terephthalate in which units deriving from terephthalic acid are substituted by units derived from isophthalic acid, as the layer of the heat sealable film in Roulin et al, Kimura et al and Wilson et al in order to obtain a package which is heat sealable at a lower temperature as taught by The Encyclopedia of Polymer Science and Engineering.

The Encyclopedia of Polymer Science and Engineering fails to disclose an aromatic polyester obtained by polycondensation of a copolyethylene terephthalate in which 2 – 20 mole percent of the units deriving from terephthalic acid are substituted by units derived from isophthalic acid. However, The Encyclopedia of Polymer Science and Engineering discloses a copolyethylene terephthalate in which units deriving from terephthalic acid are substituted by units derived from isophthalic acid as discussed above, and discloses the use of the copolymer for the purpose of obtaining a lower softening point and melting point. Therefore, one of ordinary skill in the art would have recognized the utility of varying the amount of the blend to obtain the desired melt flow rate. Therefore, the lowering of the softening point and melting point would be readily determined by through routine optimization of the amount of substitution by isophthalic acid by one having ordinary skill in the art depending on the desired use of the end product as taught by The Encyclopedia of Polymer Science and Engineering.

It therefore would be obvious for one of ordinary skill in the art to vary the amount of substitution by isophthalic acid in order to obtain the desired lowering of the softening point and melting point, since the lowering of the softening point and melting point would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by The Encyclopedia of Polymer Science and Engineering.

6. Claims 54 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Kimura et al (U.S. Patent No. 5,972,445) and Wilson et al (U.S. Patent No. 3,170,832) and further in view of Curler et al (U.S. Registration No. 28,554).



Roulin et al, Kimura et al and Wilson et al disclose a container comprising a laminated sheet having multiple layers, as discussed above. With regard to Claims 54 and 59, Roulin et al, Kimura et al and Wilson et al fail to disclose a sheet in which the layers are adhered together with a polyester based glue.

Curler et al teach the use of a interchangeability of lamination and the use of a polyester based glue (column 4, lines 62 – 65) in the making of a laminate (column 4, lines 60 – 61), therefore a sheet having multiple layers, for the purpose of using an adhesive which is permanently tacky (column 4, lines 59 – 65). One of ordinary skill in the art would therefore have recognized the advantage of providing for the adhesive of Curler et al in Roulin et al, Kimura et al and Wilson et al, which comprises a sheet having multiple layers, depending on the desired permanence of the tackiness of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for polyester glue in Roulin et al, Kimura et al and Wilson et al in order to obtain an adhesive which is permanently tacky as taught by Curler et al.

7. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Kimura et al (U.S. Patent No. 5,972,445) and Wilson et al (U.S. Patent No. 3,170,832) and further in view of Waters et al (U.S. Patent No. 5,232,786).

Roulin et al, Kimura et al and Wilson et al disclose a container comprising a laminated sheet having multiple different layers, as discussed above. Roulin et al, Kimura et al and Wilson et al do not disclose that the laminated sheet is entirely recyclable. However, Waters et al teach

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that a product having multiple different layers (column 1, lines 31 – 32) is difficult to recycle (column 1, lines 42 – 46); Waters et al therefore teach that the product, therefore the entire product, is recyclable, although the process of recycling is difficult; the container disclosed by Roulin et al, Kimura et al and Wilson et al, which is a product, is therefore entirely recyclable.

#### ANSWERS TO APPLICANT'S ARGUMENTS

8. Applicant's arguments regarding the 35 U.S.C. 103(a) rejection of Claim 36 as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Kimura et al (U.S. Patent No. 5,972,445), of record on page 2 of the previous Action, have been considered and have been found to be persuasive. The rejection is therefore withdrawn. The new rejections above are directed to amended Claim 36 and newly submitted Claims 52 – 61 and 63.

However, Applicant argues, on page 8 of the remarks dated June 27, 2005, that the combination of Roulin et al with Kimura et al is improper because Kimura et al teach a transparent sheet whereas Roulin et al teach a foamed sheet. This argument is not found to be persuasive, because transparency is not the only reason that Kimura et al provide for a crystallinity of less than 15%; heat sealing is another reason which is taught, and Roulin et al is clearly heat sealable; one of ordinary skill in the art would therefore be motivated to provide for the crystallinity of Kimura et al in Roulin et al, although Roulin et al is not transparent.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497.

The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Marc Patterson 7/6/05*

Marc A. Patterson, PhD.  
Examiner  
Art Unit 1772